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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,511	07/23/2002	David M. Hoffman	15-CT-6001	6623
23465	7590	12/15/2004	EXAMINER	
JOHN S. BEULICK C/O ARMSTRONG TEASDALE, LLP ONE METROPOLITAN SQUARE SUITE 2600 ST LOUIS, MO 63102-2740			CHURCH, CRAIG E	
			ART UNIT	PAPER NUMBER
			2882	
DATE MAILED: 12/15/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/064,511	HOFFMAN, DAVID M.	
	Examiner	Art Unit	
	Craig E. Church	2882	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al (5570403) in view of Hsieh et al (66399654). Yamazaki teaches a dual energy CT scanner comprising a rotating gantry, x-ray tube 10 with means to vary the spectral content of the x-ray beam in the Z direction (figure 16 and lines 19-22 of column 9), plural detector rows 1-2, data acquisition means 50, reconstruction processor 60 and display means 70 for showing the spectrally discriminated and combined images. In the system of figures 5 and 6 (lines 49 of column 6 to line 13 of column 7) energy discrimination is provided by scintillators 31 and 32 which have the same absorption characteristics but are of different thicknesses. Lines 14-18 of column 7 explain that the scintillators may be the same thickness, and filters are employed for spectral selection. Lines 22-67 of column 7 discuss use of wedge filters (sloped) between the source and the patient. Figure 15A shows that the filter for detector 2 is air. Lines 29-36 of column 8 reveal that the Kv applied to the x-ray tube may be varied as its focal spot is shifted to favor each detector row. Figures 4A and 12A-12C appear to teach that Yamazaki's source pitch is 1, but this is not explicitly stated. Hsieh discloses a CT system and method comprising an x-ray source 14, x-ray detectors 18, rotating gantry 12 carrying the source and detector and translatable patient support table 16. Lines 1-5 of column 5 explain that a source pitch of 1:1 is used in order to

ensure continuity of projection data, and it would have been obvious to employ a source pitch of 1:1 in Yamazaki for the same reason.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 24-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamazaki et al (5570403) as above. Lines 43-53 of column 9 suggest that more than three detector rows may be used for discriminating more than three subspectra which means that the first and third detector rows (nonadjacent rows) would have different spectral response as per claims 24-28.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Von Der Haar describes a source pitch of 1.

Applicant's arguments filed September 27, 2004 have been fully considered but they are not persuasive.

While applicant refers to lines 2-6 of column 6 of Yamazaki, he appears to not understand what it says, which is:

...when translation pitch of the bed portion in the longitudinal direction is set to one over (a distance equal to) an integral multiple of the pitch of the detector arrays in a detection system, the loci of two detector arrays are overlapped exactly.

Note that "the pitch of the detector arrays" is the distance in the Z direction from the center of one row to the center of the next row of the array and does not mean the same as "source pitch". In fact, this excerpt suggests that the source pitch may be 1, in contrast to applicant's belief.

The rest of applicant's traversal of the rejections merely quotes and requotes the language of the independent claims without a specific comparison of claim limitations to the Yamazaki teaching. Applicant states that Yamazaki does not suggest the CT system of new claims 24-28 but offers no reasons or evidence to support this conclusion.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Examiner Church at telephone number (571) 272-2488.



Craig E. Church  
Senior Examiner  
Art Unit 2882